



## Vinyl Asbestos Floor Tiles (VAT) Summary Document

During the course of routine inspections and commonly received worker health and safety queries; DOS is often asked to review floor tile concerns. This document seeks to clarify the most common concerns regarding care and maintenance of asbestos containing floor tiles. The following information summarizes current information regarding Vinyl Asbestos Floor Tiles (VAT).

### How do I know if my office floor tiles contain asbestos?

Floor tiles installed prior to 1980 must be presumed to contain asbestos unless they have been analyzed by microscopic analysis and found to be non-asbestos.

Note that it is possible that tiles installed **after** 1980 that were imported *may* contain asbestos. It is prudent industrial hygiene practice to ensure that replacement tiles are non-asbestos. Generally, tile currently manufactured in the United States will not contain asbestos.

Products such as vinyl asbestos floor tile (VAT), roofing shingles and transite exterior siding can still be lawfully installed in new or existing buildings. To verify if products installed do or do not contain asbestos, building owners should check the packaging (boxes, labels, etc.) or the manufacturer's product information sheet

### How do I have floor tiles analyzed?

Floor tiles that are in good condition and are not going to be removed need not be tested. You can presume the floor covering to contain asbestos and maintain it in accordance with this guidance document.

USEPA Method EPA/600/R-93/116 is the preferred method of analysis for VAT. Analysis must be performed by an accredited laboratory. A list of Massachusetts certified labs is found at: [http://mass.gov/dos/forms/la-rpt\\_list\\_aa.pdf](http://mass.gov/dos/forms/la-rpt_list_aa.pdf) or contact the DOS Asbestos Program at 617-626-6960.

### Does asbestos have to be removed?

No. The EPA recommends a practical approach that protects the health of building occupants. This approach includes locating and identifying asbestos materials in buildings, and proper management of the material.

When materials containing asbestos are left intact and undisturbed they do not pose a health risk to building occupants. There is a potential for exposure only when the material becomes damaged to the extent that asbestos fibers become airborne and are inhaled.

Asbestos is more likely to release fibers when it is friable. The term friable means the material can be easily crumbled. If powdered or friable forms of asbestos are disturbed and become airborne, an inhalation hazard may result. In non-friable materials like floor tile, ceiling tiles, laboratory cabinet tops, and caulks, the asbestos fibers are tightly bound in a matrix which prevents the release of fibers to the environment unless the material is abraded, sanded or sawed.

## How do I safely maintain asbestos floor tiles?

The following is excerpted from **How to Manage Asbestos in School Buildings: The AHERA Designated Person's Self Study Guide January 1996** :  
<http://www.epa.gov/region2/ahera/e23.pdf>

### Stripping of Vinyl Asbestos Floor Coverings

**Training** Custodial and maintenance personnel who are responsible for the care and maintenance of asbestos containing floor coverings should be thoroughly trained to safely and properly operate the machines, pads and floor care chemicals used at the facility.

**Frequency of Stripping** Stripping of vinyl asbestos floor coverings should be done as infrequently as possible (e.g., once per year maximum and preferably when the building is unoccupied). Excessive stripping of floors using aggressive techniques will result in increased levels of asbestos fibers in the air.

**Prior to Stripping** Prior to machine operation, apply an emulsion of chemical stripper in water to the floor. Use a mop to soften the wax or finish coat.

**Stripping Operations** When stripping floors becomes necessary, the machine used for stripping the finish should be equipped with the least abrasive pad as possible (black pads are usually the most abrasive and the white pad the least abrasive). Consult with your floor tile and floor finish product manufacturer for recommendations on which pad to use on a particular floor covering. Incorporate the manufacturer's recommendations into your floor maintenance work procedures.

The machine used to remove the wax or finish coat should be run at a low rate of speed (i.e., ranging between 175-300 rpm) during the stripping operation. There is a direct correlation between machine speeds and the release of asbestos fibers from asbestos containing floor coverings. The higher the machine speed the greater the probability of asbestos fiber release.

Never perform dry stripping. Always strip floors while wet. Do not operate a floor machine with an abrasive pad on unwaxed or unfinished floor containing-asbestos materials.

Consult with floor tile and floor finish product manufacturers concerning specific or unique problem(s) on the maintenance of your floors.

**After Stripping** After stripping and before application of a high solids floor finish, the floor should be thoroughly cleaned, while wet, preferably with a Wet-Vac HEPA filtration vacuum system.

**Finishing of Vinyl Asbestos Floor Coverings** Use of Sealer and Solids Finish Prior to applying a finish coat to a vinyl asbestos floor covering, apply 2 to 3 coats of sealer. Continue to finish the floor with a high percentage solids finish.

It is an industry recommendation to apply several thin coats of a high percentage solid finish to obtain a good sealing of the floor's surface, thereby minimizing the release of asbestos fibers during finishing work.

**Spray-Buffing Floors** When spray-buffing floors, always operate the floor machine at the lowest rates of speed possible and equip the floor machine with the least abrasive pad as possible. A recent EPA study indicated that spray-buffing with high-speed floor machines resulted in significantly higher airborne asbestos fiber concentrations than spray-buffing with low speed machines.

**Burnishing Floors** When dry-burnishing floors, always operate the floor machine at the lowest rate of speed possible to accomplish the task (i.e., 1200-1750 rpms), and equip the floor machine with the least abrasive pad as possible.

**Cleaning After Stripping & Sealing Floors** After stripping a floor and applying a new coat of sealer and finish, use a wet mop for routine cleaning whenever possible. When dry mopping, a petroleum-based mop treatment is not recommended for use.

**Maintenance During Winter** During the winter months when sanding and/or salting of icy parking lots becomes necessary, it is an industry recommendation that matting be used at the entrance way to the building and inside the doorway where feasible. This would significantly eliminate the scuffing of floors by abrasive sanding materials brought into the building on the shoes of building occupants. More frequent wet mopping and dry mopping of floors should be performed during the winter months to minimize damage to the floors.

The same recommendations holds true of buildings located on coastal areas where building occupants could track sand into the schools.

**Additional Precautions** Conditions of Glides Check to see if chair and desk glides are in good condition and replace where indicated. Worn glides can gouge the floor coverings and possibly cause asbestos fiber release.

**Parking Lot/Walkway Maintenance** During the winter months, have parking lots and walkways swept to avoid tracking salt and ice-melting compounds into the school by students. These materials can cause severe scuffing of floor coverings and lead to the release of asbestos fibers into the school

### **How can asbestos floor tiles be safely removed?**

Floor tiles in good condition should be maintained in accordance with the UESPA guidance above. If tiles are going to be removed because of renovation, removal work should be performed safely and in accordance with local, state and federal laws.

Additional Information regarding the **removal** of resilient floor coverings can be found at the Resilient Floor Coverings Institute's web site (RFCI): [http://www.rfci.com/int\\_ARF-TechInfo.htm](http://www.rfci.com/int_ARF-TechInfo.htm) *Recommended Safe Work Practices for Removal of Resilient Floor Coverings*.

This document is an excellent resource for safe, compliant work practices for asbestos containing floor tiles.

For Further information contact the Division of Occupational Safety's Asbestos Program at:  
617-969-7177

### **USEPA'S FIVE MAJOR FACTS ABOUT ASBESTOS IN BUILDINGS**

- **FACT 1** Although asbestos is hazardous, human risk of asbestos disease depends upon exposure.
- **FACT 2** Based on available data from across the nation, prevailing asbestos levels in buildings appear to be very low. Accordingly, the health risk faced by building occupants also appears to be very low.
- **FACT 3** Removal is often not a building owner's best course of action to reduce asbestos exposure. In fact, an improper removal can create a dangerous situation where one did not previously exist.
- **FACT 4** EPA only requires asbestos removal in order to prevent significant public exposure to asbestos, such as during building renovation or demolition.
- **FACT 5** EPA does recommend in-place management whenever asbestos is discovered. Instead of removal, conscientious in-place management program will usually control fiber releases, particularly when the materials are not significantly damaged and are not likely to be disturbed

**For More Information See:**

US Occupational Health & Safety Administration (OSHA):  
<http://www.osha.gov/SLTC/asbestos/index.html>

US Environmental Protection Agency (USEPA):  
<http://www.epa.gov/asbestos>

Massachusetts Division of Occupational Safety (DOS):  
[www.mass.gov/dos](http://www.mass.gov/dos)

Massachusetts Department of Environmental Protection (DEP):  
<http://mass.gov/dep/air/asbhom01.htm>